

Old/Traditional

LTI

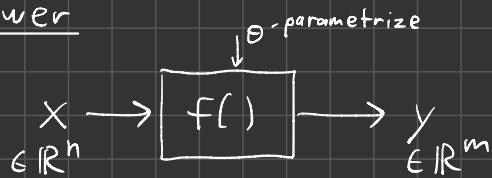


- infinite sequence input/output
- time invariant
- analog transmission lines
- wireless

sine wave in \rightarrow sine wave out
at same frequency,
different amplitude
& phase
 \hookrightarrow TF is a
function of frequency

then can pair this with
the Fourier transform

Newer



- if linear, then $y = Ax$ (not TI)
- if TI, then A is Toeplitz $\rightarrow A = \begin{bmatrix} \diagup \\ \diagup \\ \diagup \end{bmatrix}$
- most generally, nonlinear $\rightarrow f(\cdot)$

- DNNs live in
this domain